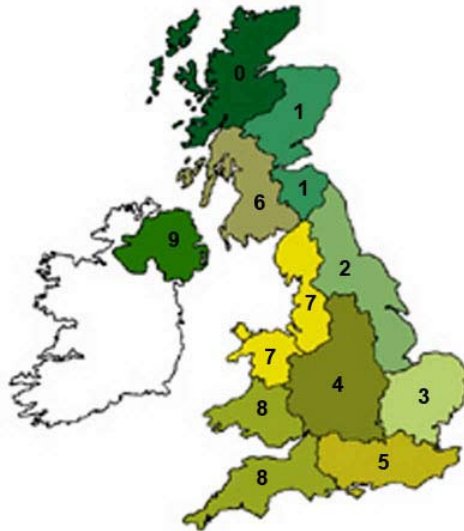


# NADIS Parasite Forecast – October 2011

## Use of meteorological data to predict the prevalence of parasitic diseases

### Regional Weather (based on Met Office figures)



**REGIONS**

0 N W Scotland	6 S W Scotland
1 E Scotland	7 N W England & N Wales
2 N E England	8 S W England & S Wales
3 E Anglia	9 N Ireland
4 The Midlands	10 Wales
5 S England	

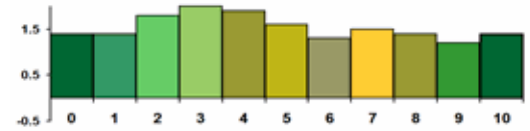
September temperatures were between 1 and 2 °C above the 1961-1990 long-term average for all UK regions this year, being furthest above in central and eastern England.

Three-month mean temperatures are now above the expected level in all regions, although only by around half a degree or less. The very warm spell at the end of the month will have contributed to these figures.

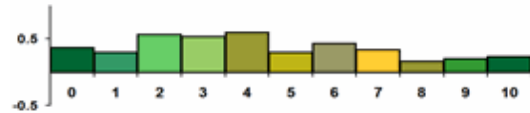
Rainfall in England was only about three-quarters of the 1961-1990 long-term average for September, while Wales received around average levels, and both Scotland and Northern Ireland received about a third more rain than is usual for the month. The rain across the UK was concentrated mostly towards the west.

Three-month rainfall figures are around 20 per cent or more above expected levels in the Scottish regions, around 30 per cent below expected in the Midlands, and closer to average elsewhere.

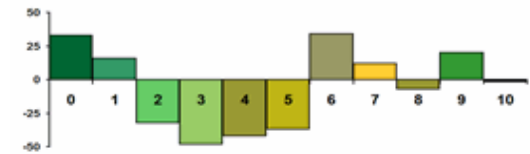
Temperature: September 2011  
(as % Above/Below Regional Average 1961-1990)



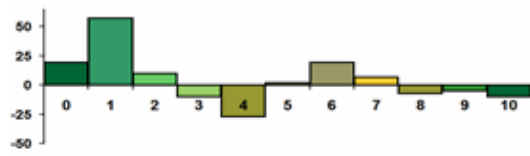
Temperature: July - September 2011  
(as % Above/Below Regional Average 1961-1990)



Rainfall: September 2011  
(as °C Above/Below Regional Average 1961-1990)



Rainfall: July - September 2011  
(as °C Above/Below Regional Average 1961-1990)



**October** began very warm and dry in England and Wales, although cooler and wetter elsewhere. Conditions became more typical of the season after a day or two. Forecasts to the end of the month suggest unsettled and windy conditions, drier and brighter in the south. There may be some frost later in the month.

The first two weeks of **November** are often wet and windy, followed by a quiet, high-pressure period for most of the month. Wet and windy weather often returns in the last week of November.

Most long-term forecasts for the UK winter predict a very cold, snowy season. However, the reliability of long-term weather forecasting is low.

## October Parasite Update and Forecast

The most recent version of this monthly parasite forecast may be accessed at [www.nadis.org.uk](http://www.nadis.org.uk).

### LIVER FLUKE FORECAST

This month's updated forecast continues to suggest the risk of a **high prevalence** of liver fluke disease in **Scotland, Wales and western England**. Although figures are not available to produce a Northern Ireland forecast, climate data also suggest the risk of a high prevalence there. Figures suggest a low prevalence is expected in the rest of the country.

Those habitats that have remained wet through the summer will be the high-risk grazing areas, and may well carry infective metacercariae through November. In these habitats, the risk period for acute fluke disease may well extend into the winter. Even in the absence of acute fluke disease, smaller burdens of fluke acquired



now may lead to subacute or chronic disease later in the year.

Individual farm and field history, in addition to disease forecasts, will need to be considered when formulating and monitoring a fluke control plan for a farm. Sheep at risk will probably already have been dosed earlier in the autumn, but a second autumn dose four to six weeks

after the first, if not already given, should be considered in the high risk regions this year. Triclabendazole is often the drug of choice in the autumn, unless there is evidence of resistance in the fluke population. Later, a winter dose to remove adult and immature fluke should be considered and this will be discussed future forecasts.

## **SHEEP NEMATODES**

### **Parasitic gastro-enteritis**

Outbreaks of trichostrongylosis and mixed parasitic gastroenteritis (PGE) in store and replacement lambs are often seen in late autumn/winter. Faecal egg count monitoring of batches of lambs on contaminated pasture is an invaluable tool in controlling PGE without the over-use of anthelmintics, as recommended by SCOPS. Around 10 fresh samples can be collected from the pasture following gathering in a field corner for 10 minutes and these can be examined ideally individually, otherwise pooled, at the laboratory or vet practice. Decisions about dosing and further sampling can then be made with veterinary advice.



***Trichostrongylus worms often form an increasing percentage of sheep worm burdens over the autumn and winter. Heavy infections cause “black scour”, sometimes with associated bone problems. Lighter infections affect growth rates.***

Locally, dry spells leading to dry ground conditions may prevent nematode larvae from either leaving the faecal mass, or migrating onto the herbage. Thus, drier contaminated pastures may not be very infective until the onset of wetter weather, when a flush of infective larvae may appear on the pasture. This may be dangerous for grazing stock. Any significant rainfall following a dry spell may indicate the need to treat lambs on contaminated pastures, or at least monitor them closely.

Worm eggs passed by undosed stock may still develop into infective larvae (albeit slowly) if mean temperatures remain around 10 °C or above. Pasture contaminated with worm eggs earlier in the year may remain infective through the autumn and winter, although infectivity is relatively low when temperatures are below 5 °C and larval movement and metabolism are minimal, and the overwintering larval burden will also decline with time.



### **Nematodirus**

In recent years, increased outbreaks of autumn nematodiosis have been identified, often as part of a more mixed worm burden. Some of this appears to be due to overwintered eggs that did not hatch in the spring, and some to eggs passed in the spring that develop and hatch without the need for the winter chill period that would normally be expected in this parasite.

The effect of climate on the autumn peak of *Nematodirus* larvae on the pasture is unclear, however a positive correlation exists in the published surveillance figures (VIDA 2002-2009) between high levels of diagnosed nematodiosis in the spring and high levels in the autumn/winter.

Based on this, disease risk in autumn/winter 2010 may be around average. Attempts to identify high-risk pastures will have to include grazing and disease history this spring and also last autumn, as *Nematodirus* eggs passed then will probably not have hatched in the spring and pastures may now be infective.

### **Haemonchus**

As the weather becomes colder, most acquired *Haemonchus* larvae will inhibit in the abomasal wall of the host sheep, resuming development again in the spring, potentially causing type 2 disease and subsequent egg shedding in the spring/early summer.

If farm history or monitoring for the presence of *Haemonchus* suggests that ewes may be carrying significant arrested larval burdens, then treatment pre-tupping and/or at lambing may be indicated to avoid type 2 disease, however implications for the selection of anthelmintic-resistant worms on the farm need to be considered. If a lambing dose is to be given to the ewes in these circumstances, it should be one with a good larvicidal activity; the use of levamisole should be avoided.

## **CATTLE NEMATODES**

**Dictyocaulus** outbreaks are usually decreasing significantly in frequency by November. Local dry spells may reduce the number of outbreaks further, however the disease risk may increase significantly when rain (especially thunderstorms) release infection that has become locked up in faecal pats. Any signs of coughing in unvaccinated susceptible cattle at pasture before housing, or in undosed stock after housing, should alert the stockman to the likely presence of lungworm and this should be rapidly investigated/treated.

Any pasture infected with **Ostertagia** larvae over the grazing season may mean a risk of type 2 ostertagiasis in any youngstock that graze these pastures in the

autumn and do not receive a larvicidal housing dose of anthelmintic. This dose will also clear any lungworm infections that are present. In most cases, adults do not need a housing dose for gutworms, although this may have implications for ectoparasite and lungworm control, and veterinary advice should be sought. Group 3 (macrocyclic lactone) wormers are often recommended for the housing dose. The persistent activity of some of these drugs may be utilised by dosing animals before housing, protecting against lungworm disease during the late grazing season while preventing the acquisition of fresh gastro-intestinal worm burdens in the run up to housing.

*To try a quiz based on this article and have it immediately electronically marked, click [QUIZ](#)*

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